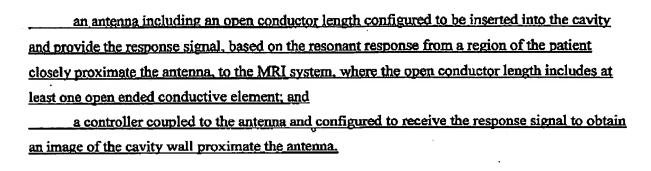
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- 29. (amended) The medical apparatus of claim 28 wherein the controller is configured to calculate antenna location by processing data to obtain an image of the antenna, antenna position, and antenna orientation.
- 40. (twice amended) A method of generating an image of a wall of a body cavity in a patient, the method comprising:

 inserting an antenna including an open conductor length into the cavity, where the open conductor length includes at least one open ended conductive element;

 generating a magnetic field gradient and electromagnetic (EM) radiation external from the patient and transmitting the gradient and EM radiation into the patient;

 transmitting a response signal, based on a detected resonant response from a region of the patient closely proximate the antenna, to a magnetic resonance imaging (MRI) processor;

 receiving the response signal at the MRI processor; and obtaining an image of the cavity wall proximate the antenna based on the response signal.
- 42. (amended) The method of claim 41 wherein calculating antenna location comprises:

 processing data to obtain an image of the antenna.
- 49. (twice amended) A method of generating an image of a blood vessel wall of a blood vessel in a patient, the method comprising:

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inserting an antenna including an open conductor length into the blood vessel,
where the open conductor length includes at least one open ended
conductive element;

passing the antenna through the blood vessel to a site to be imaged;

- generating a magnetic field gradient and electromagnetic (EM) radiation external

 from the patient and transmitting the gradient and EM radiation into the
 patient:
- transmitting a response signal, based on a detected resonant response from a region of the patient closely proximate the antenna, to a magnetic resonance imaging (MRI) processor;

receiving the response signal at the MRI processor;

- and obtaining an image of the blood vessel wall proximate the antenna based on the response signal.
- 50. (twice amended) A medical apparatus for imaging a blood vessel wall of a blood vessel in a patient by interacting with a magnetic resonance imaging (MRI) system which generates a magnetic field gradient and electromagnetic (EM) radiation external from the patient and transmits the gradient and EM radiation into the patient and receives a response signal indicative of a resonant response from the patient, the apparatus comprising:
 - an antenna configured to be inserted into the blood vessel and passed along the

 blood vessel to a site to be imaged and to provide the response signal, based
 on the resonant response from a region of the patient closely proximate the
 antenna, to the MRI system, the antenna including an open conductor length
 comprising at least one open ended conductive element; and
 - a controller coupled to the antenna and configured to receive the response signal and repeatedly calculate antenna location to obtain an image of the blood vessel wall proximate the antenna.

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Cancelled.

- 52. (amended) The medical apparatus of claim 50 wherein the antenna includes a first elongate conductor having a portion thereof forming the open conductor length, and a second elongate conductor, the first and second elongate conductors extending to a proximal end of the antenna.
- 54. (twice amended) A medical apparatus for imaging a body cavity wall of a body cavity in a patient by interacting with a magnetic resonance imaging (MRI) system which generates a magnetic field gradient and electromagnetic (EM) radiation external from the patient and transmits the gradient and EM radiation into the patient and receives a response signal indicative of a resonant response from the patient, the apparatus comprising:
 - an MRI antenna configured to be inserted into the body cavity and passed along
 the body cavity to a site to be imaged and to provide the response signal,
 based on the resonant response from a region of the patient closely
 proximate the antenna, to the MRI system, the antenna including an open
 conductor length comprising at least one open ended conductive element.
- 56. (amended) A method of generating an image of a wall of a body cavity in a patient, the method comprising:
 - inserting a magnetic resonance imaging (MRI) antenna into the body cavity, the antenna including an open conductor length comprising at least one open ended conductive element;
 - passing the MRI antenna through the body cavity to a site to be imaged; and obtaining an MRI image of the body cavity wall proximate the antenna.
 - 59. (amended) The method of claim 56 wherein obtaining an MRI image comprises: processing data to obtain an image of the antenna.